

K101812

510(k) SUMMARY

**BLACKSTONE CONSTRUX MINI™ PEEK SPACER SYSTEM**

Sponsor: Orthofix, Inc.  
1720 Bray Central Dr.  
McKinney, TX 75069 SEP 27 2010

Registration Number: 2183449

Contact Person: Russell Johnson, Regulatory Affairs Specialist

Telephone Number: (972) 529-3177

Fax Number: (469) 742-2556

Email: russelljohnson@orthofix.com

Date Prepared: 9-20-2010

Submitter: Martin G. Sprunck, Regulatory Affairs Manager

Submitter Contact: 55 Lane Road, Suite 150  
Fairfield, NJ 07004  
973-406-2847  
martinsprunck@orthofix.com

Manufacturer: Orthofix, Inc.  
1720 Bray Central Dr.  
McKinney, TX 75069

Registration Number: 2183449

Contract Manufacturer: Marox Corporation  
373 Whitney Avenue  
Holyoke, MA 01040-2766

Trade Name: Construx Mini Spacers

System Name: Construx Mini PEEK Spacer System

Product Codes: ODP – Intervertebral Fusion Device with Bone Graft, Cervical  
MQP – Spinal Intervertebral Body Fixation Orthosis

Common Name: Intervertebral body fusion device

K101812

Regulatory Classification: Class II - 888.3080 - Intervertebral Body Fusion Device  
888.3060 - Spinal Intervertebral Body Fixation Orthosis

Review Panel: Orthopedic Device Panel

Predicate Devices: Blackstone Medical, Inc. Construx Mini (K051246 SE 6-14-05)  
Spinal Elements, Inc., Crystal Device, K073351 SE 1-4-2008  
Custom Spine, Inc., Pathway ACIF, K092904 SE 12-22-2009  
DePuy Spine, Inc. Bengal™ System, K081917 SE 5-22-2009

#### Intended Use / Indications for Use

When used as a cervical intervertebral body fusion device, the Construx Mini PEEK System is indicated for spinal fusion procedures at one level in the cervical spine (C2-T1), in skeletally mature patients with degenerative disc disease (DDD). DDD is defined as neck pain of discogenic origin with degeneration of the disc confirmed by patient history and radiographic studies.

The Construx Mini PEEK System is intended for use with autograft and supplemental internal fixation, e.g.: the Blackstone Medical Ascent™ or Ascent LE™ POCT System.

Patients must have undergone a regimen of at least six (6) weeks of non-operative treatment prior to being treated with the Construx Mini PEEK System in the cervical spine.

The Construx Mini PEEK device is used singly and is implanted using an anterior approach.

When used as a Partial Vertebral Body Replacement (VBR) System, the Construx Mini PEEK System is indicated for use in the thoracolumbar spine (T1-L5) for partial replacement (i.e., partial vertebrectomy) of a diseased vertebral body resected or excised for the treatment of tumors, to achieve anterior decompression of the spinal cord and neural tissues, and to restore the height of a collapsed vertebral body. The Construx Mini PEEK System is also indicated for treating fractures of the thoracic and lumbar spine.

The Construx Mini PEEK System is designed to restore the biomechanical integrity of the anterior, middle, and posterior spinal column even in the absence of fusion for a prolonged period of time. The Partial VBR device is intended to be used with autograft or allograft.

The Construx Mini PEEK System is intended for use with internal fixation. The supplemental internal fixation system that may be used with the Construx Mini PEEK

K10.1812

System is the Blackstone Medical Spinal Fixation System (SFS) or the Firebird Spinal Fixation System.

### **Technological Characteristics**

The Construx Mini PEEK Spacer System components consist of:

- 1) A PEEK Spacer
- 2) cp Titanium Markers

The Construx Mini Spacer System is a Cervical IBFD device that is implanted using anterior surgical approach with the intention is to achieve intervertebral spinal fusion. In addition, the Construx Mini is intended to contain autologous bone graft to facilitate intervertebral fusion. The Construx Mini performance data, in combination with a dimensional comparison to predicate devices and testing, has been used to demonstrate substantial equivalence with devices that are cleared for both Cervical IBFD and Partial VBR indications.

The testing conducted for the Construx Mini included Static Compression, Dynamic Compression, Static Torsion, Dynamic Torsion, and Subsidence. The testing was conducted under ASTM F2077-03 and ASTM F2267-04 guidance.

### **Substantial Equivalence**

The Construx Mini Spacer System has been demonstrated to be substantially equivalent to predicate devices in their intended use, indications for use, technological characteristics and principles of operation. Any differences between the Construx Mini Spacer System and its predicates do not present new issues of safety or effectiveness, therefore, the Construx Mini Spacer System is substantially equivalent to its predicate devices.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room -WO66-G609  
Silver Spring, MD 20993-0002

Orthofix, Inc.  
% Mr. Russell Johnson  
Regulatory Affairs Specialist  
1720 Bray Central Drive  
McKinney, Texas 75069

SEP 27 2010

Re: K101812

Trade/Device Name: Construx Mini™ PEEK Spacer System  
Regulation Number: 21 CFR 888.3080  
Regulation Name: Intervertebral body fusion device  
Regulatory Class: Class II  
Product Code: ODP, MQP  
Dated: June 25, 2010  
Received: June 29, 2010

Dear Mr. Johnson:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act

or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



Mark N. Melkerson  
Director  
Division of Surgical, Orthopedic  
And Restorative Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

### Indications for Use Statement

510(k) Number (if known): K101812

Device Name: Construx Mini™ PEEK Spacer System

SEP. 27 2010

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Prescription Use X  
(Part 21 C.F.R. 801 Subpart D)


AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 C.F.R. 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE -- CONTINUE ON ANOTHER PAGE IF  
NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

  
(Division Sign-Off)  
Division of Surgical, Orthopedic,  
and Restorative Devices

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